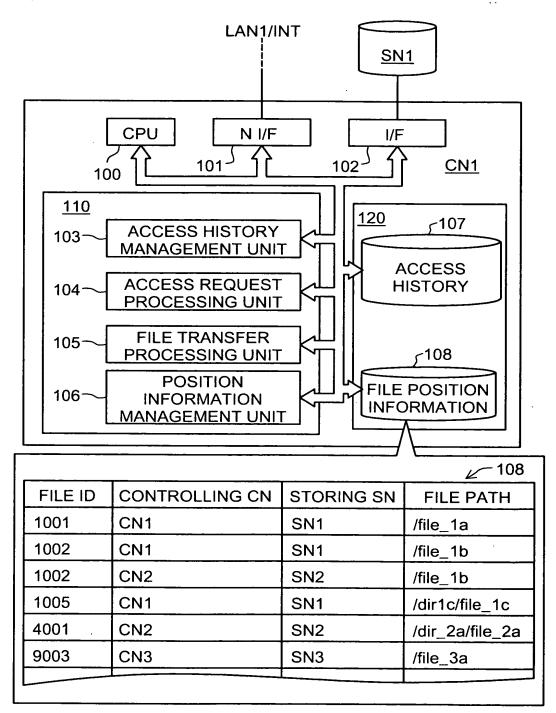


Fig.2



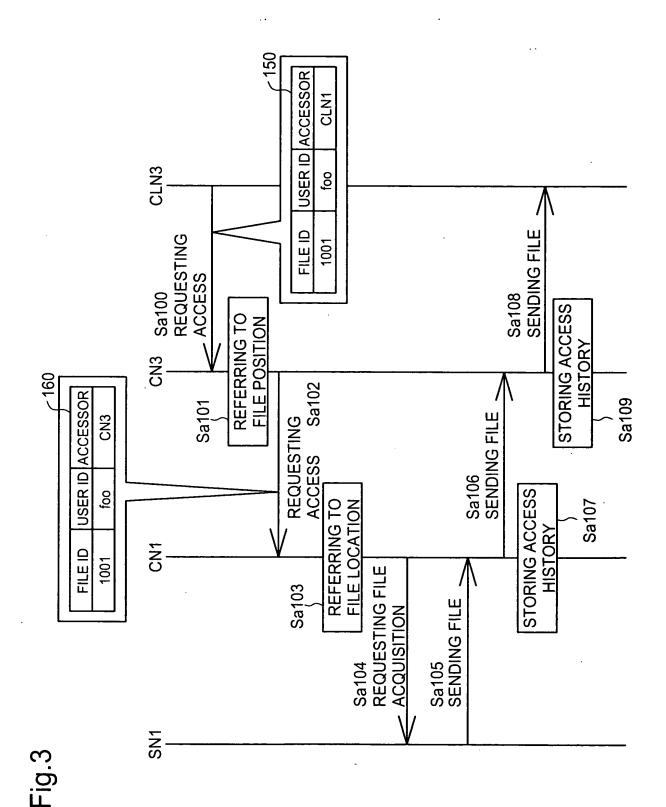


Fig.4

107	ACCESSOR	CLN1	CN3	CN3	CN3							
	USER ID	foo										
	FILE ID	1001	1002	1001	1002	1002	1001	1001	1001	1001	1001	
	REQUEST TIME	15:57:10	16:10:11	17:32:20	19:53:34	21:43:10	20:20:03	08:45:54	09:50:23	13:23:28	09:35:23	
	REQUEST DATE	2003/07/09	2003/07/10	2003/07/11	2003/07/11	2003/07/11	2003/07/11	2003/07/12	2003/07/13	2003/07/13	2003/07/14	
	<u></u>	-	2	3	4	5	9	2	8	6	10	

Fig.5

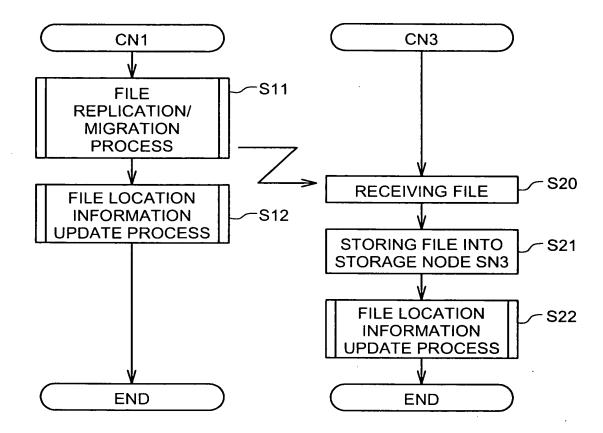


Fig.6

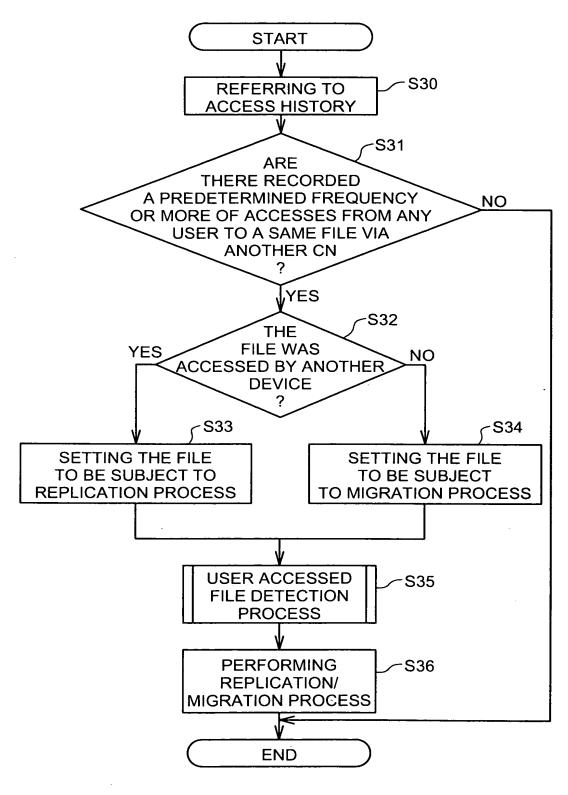


Fig.7

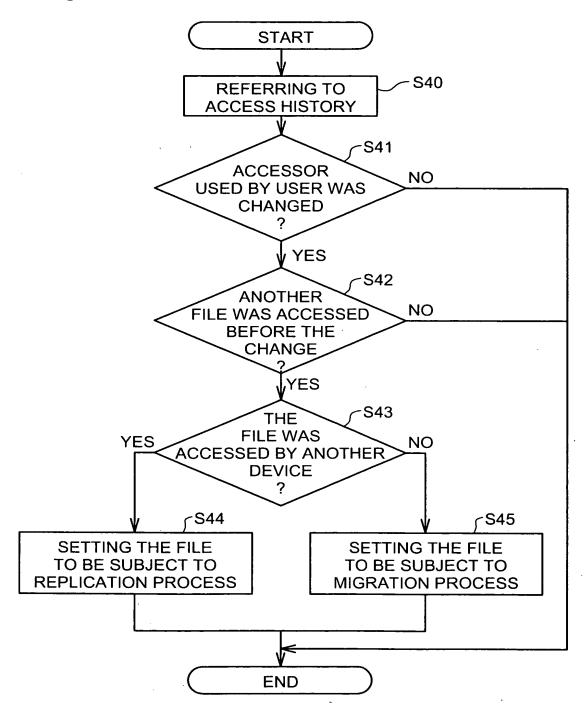


Fig.8A

MIGRATION

•	1	()	ξ

FILE ID	CONTROLLING CN	STORING SN	FILE PATH
1001	CN1	SN1	/file_1a
1002	CN1	SN1	/file_1b
1002	CN2	SN2	/file_1b

1

108a

			<u></u>
FILE ID	CONTROLLING CN	STORING SN	FILE PATH
1001	CN3	SN3	/file_1a
1002	CN3	SN3	/file_1b
1002	CN2	SN2	/file_1b
			

Fig.8B

REPLICATION

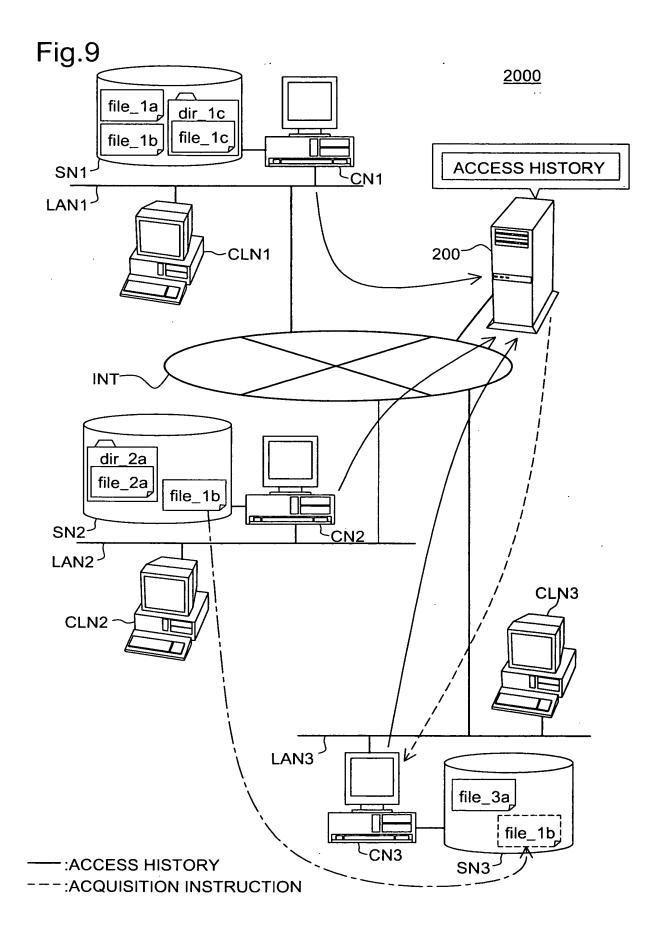
<u>108</u>

FILE ID	CONTROLLING CN	STORING SN	FILE PATH
1001	CN1	SN1	/file_1a
1002	CN1	SN1	/file_1b
1002	CN2	SN2	/file_1b



<u>108a</u>

FILE ID	CONTROLLING CN	STORING SN	FILE PATH
1001	CN1	SN1	/file_1a
1001	CN3	SN3	/file_1a
1002	CN1	SN1	/file_1b
1002	CN2	SN2	/file_1b
1002	CN3	SN3	/file_1b



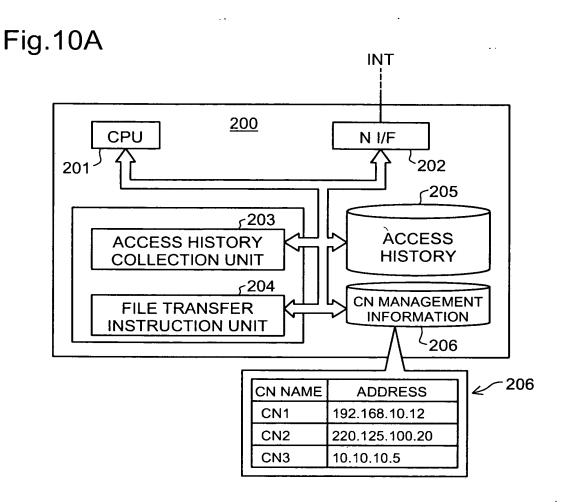


Fig.10B

			:	<u>300</u>	
REQUEST DATE	REQUEST TIME	FILE ID	FILE INTERMEDIARY CN	ACCESSOR	
2003/05/05	12:15:30	4001	CN2	CLN1	~301
2003/05/05	16:40:52	1001	CN1	CLN1	~302
2003/05/05	20:36:11	1005	. CN1	CN2	~303

Fig.11

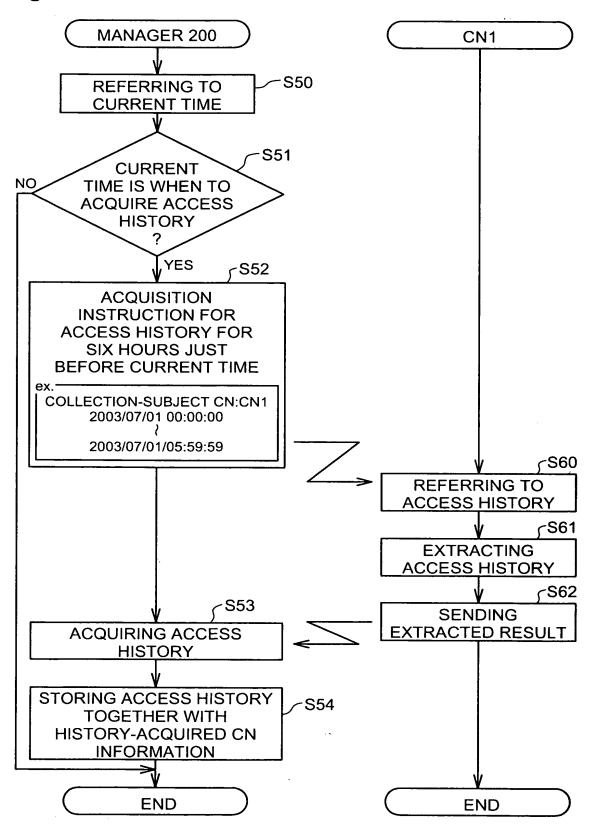


Fig. 12

REQUEST FILE ID II	FILE INTERMEDIARY ACCESSOR CN	ACCESSOR	HISTORY-ACQUIRED CN
15:57:10 1002	CN1	CLN1	CN1
17:32:20 1001	CN1	CLN1	CN1
17:32:20 1002	CN1	CLN1	CN1
19:53:34 1001	CN1	CLN1	CN1
21:43:10 1002	CN2	CLN3	CN3
20:20:03 1002	CN2	CLN3	CN3
08:45:54 1002	CN2	CLN3	CN3
		CN2 CN2	

205

